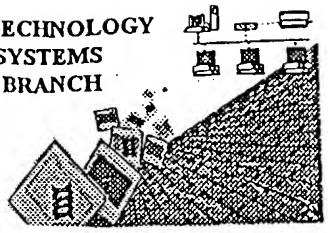
BIOTECHNOLOGY
SYSTEMS
BRANCH



RAW SEQUENCE LISTING
ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 10/804,331
Source: IFW0
Date Processed by STIC: 12/2/04

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.
PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, TELEPHONE: 571-272-2510; FAX: 571-273-0221

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 4.2 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

http://www.uspto.gov/web/offices/pac/checker/chkrnote.htm

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.
Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.
Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<http://www.uspto.gov/ebc/efs/downloads/documents.htm> , **EFS Submission User Manual** - ePAVE)
2. U.S. Postal Service: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
3. **Hand Carry, Federal Express, United Parcel Service, or other delivery service (EFFECTIVE 06/05/04):** U.S. Patent and Trademark Office, 220 20th Street S., Customer Window, Mail Stop Sequence, Crystal Plaza Two, Lobby, Room 1B03, Arlington, VA 22202

Revised 05/17/04

Raw Sequence Listing Error Summary

ERROR DETECTED **SUGGESTED CORRECTION** **SERIAL NUMBER:** 10/804,331

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE

1____ Wrapped Nucleics / Wrapped Aminos — The number/text at the end of each line "wrapped" down to the next line. This may occur if your file was retrieved in a word processor **after** creating it. Please adjust your right margin to .3; this will prevent "wrapping."

2____ Invalid Line Length — The rules require that a line **not exceed** 72 characters in length. This includes white spaces.

3____ Misaligned Amino Numbering — The numbering under each 5th amino acid is misaligned. Do **not** use tab codes between numbers; use **space characters**, instead.

4____ Non-ASCII — The submitted file was **not** saved in ASCII(DOS) text, as **required** by the Sequence Rules. **Please ensure your subsequent submission is saved in ASCII text.**

5____ Variable Length — Sequence(s)____contain n's or Xaa's representing more than one residue. **Per Sequence Rules, each n or Xaa can only represent a single residue.** Please present the **maximum** number of each residue having variable length and indicate in the <220>-<223> section that some may be missing.

6____ PatentIn 2.0 "bug" — A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequences(s) _____. Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. **This applies to the mandatory <220>-<223> sections for Artificial or Unknown sequences.**

7____ Skipped Sequences (OLD RULES) — Sequence(s) ____ missing. If intentional, please insert the following lines for **each** skipped sequence:
(2) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)
(i) SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading)
(xi) SEQUENCE DESCRIPTION:SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)
This sequence is intentionally skipped

Please also adjust the "(ii) NUMBER OF SEQUENCES:" response to **include** the skipped sequences.

8____ Skipped Sequences (NEW RULES) — Sequence(s) _____ missing. If **intentional**, please insert the following lines for **each** skipped sequence.
<210> sequence id number
<400> sequence id number
000

9____ Use of n's or Xaa's (NEW RULES) — Use of n's and/or Xaa's have been detected in the Sequence Listing.
Per 1.823 of Sequence Rules, use of <220>-<223> is MANDATORY if n's or Xaa's are present.
In <220> to <223> section, please explain location of **n** or **Xaa**, and which residue **n** or **Xaa** represents.

10____ Invalid <213> Response — Per 1.823 of Sequence Rules, the only **valid** <213> responses are: Unknown, Artificial Sequence, or scientific name (Genus/species). <220>-<223> section is **required** when <213> response is Unknown or is Artificial Sequence

11____ Use of <220> — Sequence(s) _____ missing the <220> "Feature" and associated numeric identifiers and responses.
Use of <220> to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or "Unknown." Please explain source of genetic material in <220> to <223> section.
(See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of Sequence Rules)

12____ PatentIn 2.0 "bug" — Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.

13____ Misuse of n/Xaa — "n" can **only** represent a single nucleotide; "Xaa" can **only** represent a single amino acid

IFWO

RAW SEQUENCE LISTING DATE: 12/02/2004
PATENT APPLICATION: **US/10/804,331** TIME: 12:44:08

Input Set : **A:\9368-5.ST25.txt**
Output Set: **N:\CRF4\12022004\J804331.raw**

pp. 1-3
Does Not Comply
Corrected Diskette Needed

This is an insufficient explanation. Give source of genetic material. (see item 11 on Error Summary Sheet)

same error

```
 3 <110> APPLICANT: Smith, Johnathan F.
 4       Kamrud, Kurt I.
 5       Rayner, Jon O.
 7 <120> TITLE OF INVENTION: IMPROVED ALPHAVIRUS REPLICONS AND HELPER CONSTRUCTS
 9 <130> FILE REFERENCE: 9368-5
11 <140> CURRENT APPLICATION NUMBER: US 10/804,331
12 <141> CURRENT FILING DATE: 2004-03-19
14 <150> PRIOR APPLICATION NUMBER: US 60/456,196
15 <151> PRIOR FILING DATE: 2003-03-20
17 <160> NUMBER OF SEQ ID NOS: 44
19 <170> SOFTWARE: PatentIn version 3.2
21 <210> SEQ ID NO: 1
22 <211> LENGTH: 18
23 <212> TYPE: PRT
24 <213> ORGANISM: Artificial
26 <220> FEATURE:
27 <223> OTHER INFORMATION: Insertion sequence
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32 1               5                  10                  15
35 Val Asp
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40 <211> LENGTH: 357
41 <212> TYPE: DNA
42 <213> ORGANISM: Artificial
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45 <223> OTHER INFORMATION: Spacer sequence
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50 acgttgcgca aactattaac tggcgaacta cttactctag ctaccaactc tttttccgaa    120
52 ggtaactggc ttcagcagag cgcagatacc aaatactgtt cttctagtgt agccgtagtt    180
54 aggccaccac ttcaagaact ctgtagcacc gcctacatac ctcgctctgc taatcctgtt    240
56 accagtggct gctgccagtg gcgataagtc gtgtcttacc gggttggact caagacgata    300
58 gttaccggat aaggcgcagc ggtcgggctg aacgggggt tcgtgcacac agcccag       357
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62 <211> LENGTH: 342
63 <212> TYPE: DNA
64 <213> ORGANISM: Artificial
66 <220> FEATURE:
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72 tatccatttt cggatctgat caagagacag gatgaggatc gtttcgcatg attgaacaag    120
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RAW SEQUENCE LISTING DATE: 12/02/2004
PATENT APPLICATION: **US/10/804,331** TIME: 12:44:08

Input Set : **A:\9368-5.ST25.txt**
Output Set: **N:\CRF4\12022004\J804331.raw**

74 atggattgca cgcaggttct ccggccgctt gggtggagag gctattcggc tatgactggg 180
76 cacaacagac aatcggctgc tctgatgccg ccgtgttccg gctgtcagcg caggggcgcc 240
78 cggttctttt tgtcaagacc gacctgtccg gtgccctgaa tgaactgcag gacgaggcag 300
80 cgcggctatc gtggctggcc acgacgggcg ttccttgcgc ag 342
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84 <211> LENGTH: 257
85 <212> TYPE: DNA
86 <213> ORGANISM: Artificial
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89 <223> OTHER INFORMATION: Spacer sequence
91 <400> SEQUENCE: 4
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94 cgagataggg ttgagtgttg ttccagtttg gaacaagagt ccactattaa agaacgtgga 120
96 ctccaacgtc aaagggcgaa aaaccgtcta tcagggcgat ggcccactac gtgaaccatc 180
98 accctaatca agtttttttgg ggtcgaggtg ccgtaaagca ctaaatcgga accctaaagg 240
100 gagcccccga tttagag 257
103 <210> SEQ ID NO: 5
104 <211> LENGTH: 383
105 <212> TYPE: DNA
106 <213> ORGANISM: Artificial
108 <220> FEATURE:
109 <223> OTHER INFORMATION: Spacer sequence
111 <400> SEQUENCE: 5
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114 cattcagggc accggacagg tcggtcttga caaaaagaac cgggcgcccc tgcgctgaca 120
116 gccggaacac ggcggcatca gagcagccga ttgtctgttg tgcccagtca tagccgaata 180
118 gcctctccac ccaagcggcc ggagaacctg cgtgcaatcc atcttgttca atcatgcgaa 240
120 acgatcctca tcctgtctct tgatcagatc cgaaaatgga tatacaagct cactcattag 300
122 gcaccccagg ctttacactt tatgcttccg gctcgtatgt tgtgtggaat tgtgagcgga 360
124 taacaatttc acacaggaaa cag 383
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129 <212> TYPE: DNA
130 <213> ORGANISM: Artificial
132 <220> FEATURE:
133 <223> OTHER INFORMATION: Spacer sequence
135 <400> SEQUENCE: 6
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138 tcatccagcc ggcgtcccgg aaaacgattc cgaagcccaa cctttcatag aaggcggcgg 120
140 tggaatcgaa atctcgtgat ggcaggttgg gcgtcgcttg gtcggtcatt tcgaacccca 180
142 gagtcccgct cagaagaact cgtcaagaag gcgatagaag gcgatgcgct gcgaatcggg 240
144 agcggcgata ccgtaaagca cgaggaagcg gtcagcccat tcgccgccaa gcttgtatat 300
146 ccattttcgg atctgatcaa gagacaggat gaggatcgtt tcgcatgatt gaacaagatg 360
148 gattgcacgc aggttctccg gccgcttggg tggagaggct attcggctat gactgggcac 420
150 aacagacaat cggctgctct gatgccgccg tgttccggct gtcagcgcag gggcgcccgg 480
152 ttctttttgt caagaccgac ctgtccggtg ccctgaatga actgcaggac gaggcagcgc 540
154 ggctatcgtg gctggccacg acgggcgttc cttgcgcag 579
157 <210> SEQ ID NO: 7
158 <211> LENGTH: 749

RAW SEQUENCE LISTING DATE: 12/02/2004
PATENT APPLICATION: US/10/804,331 TIME: 12:44:08

Input Set : A:\9368-5.ST25.txt
Output Set: N:\CRF4\12022004\J804331.raw

159 <212> TYPE: DNA
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162 <220> FEATURE:
163 <223> OTHER INFORMATION: Spacer sequence
165 <400> SEQUENCE: 7
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168 tcatccagcc ggcgtcccgg aaaacgattc cgaagcccaa cctttcatag aaggcggcgg 120
170 tggaatcgaa atctcgtgat ggcaggttgg gcgtcgcttg gtcggtcatt tcgaacccca 180
172 gagtcccgct cagaagaact cgtcaagaag gcgatagaag gcgatgcgct gcgaatcggg 240
174 agcggcgata ccgtaaagca cgaggaagcg gtcagcccat tcgccgccaa gctcttcagc 300
176 aatatcacgg gtagccaacg ctatgtcctg atagcggtcc gccacaccca gccggccaca 360
178 gtcgatgaat ccagaaaagc ggccattttc caccatgata ttcggcaagc aggcatcgcc 420
180 atgggtcacg acgagatcct cgccgtcggg catgcgcgcc ttgagcctgg cgaacagttc 480
182 ggctggcgcg agcccctgat gctcttcgtc cagatcatcc tgatcgacaa gaccggcttc 540
184 catccgagta cgtgctcgct cgatgcgatg tttcgcttgg tggtcgaatg ggcaggtagc 600
186 cggatcaagc gtatgcagcc gccgcattgc atcagccatg atggatactt tctcggcagg 660
188 agcaaggtga gatgacagga gatcctgccc cggcacttcg cccaatagca gccagtccct 720
190 tcccgcttca gtgacaacgt cgagcacag 749
193 <210> SEQ ID NO: 8
194 <211> LENGTH: 30
195 <212> TYPE: DNA
196 <213> ORGANISM: Artificial
198 <220> FEATURE:
199 <223> OTHER INFORMATION: PCR primer
201 <400> SEQUENCE: 8
202 tggcgcgccg ctcggaattc cccctctccc 30
205 <210> SEQ ID NO: 9
206 <211> LENGTH: 29
207 <212> TYPE: DNA
208 <213> ORGANISM: Artificial
210 <220> FEATURE:
211 <223> OTHER INFORMATION: PCR primer
213 <400> SEQUENCE: 9
214 aggcgcgcct tctatgtaag cagcttgcc 29
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220 <213> ORGANISM: Artificial
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223 <223> OTHER INFORMATION: PCR primer
225 <400> SEQUENCE: 10
226 gctggatcca tggagaaaaa aatcactgga 30
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230 <211> LENGTH: 31
231 <212> TYPE: DNA
232 <213> ORGANISM: Artificial
234 <220> FEATURE:
235 <223> OTHER INFORMATION: PCR primer
237 <400> SEQUENCE: 11

RAW SEQUENCE LISTING DATE: 12/02/2004
PATENT APPLICATION: US/10/804,331 TIME: 12:44:08

Input Set : A:\9368-5.ST25.txt
Output Set: N:\CRF4\12022004\J804331.raw

238 cgatctagat tacgccccgc cctgccactc a 31
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242 <211> LENGTH: 26
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244 <213> ORGANISM: Artificial
246 <220> FEATURE:
247 <223> OTHER INFORMATION: PCR primer
249 <400> SEQUENCE: 12
250 cggaattcat tatcatcgtg tttttc 26
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255 <212> TYPE: DNA
256 <213> ORGANISM: Artificial
258 <220> FEATURE:
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261 <400> SEQUENCE: 13
262 cgggatcccc cctaacgtta ctggccgaag c 31
265 <210> SEQ ID NO: 14
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267 <212> TYPE: DNA
268 <213> ORGANISM: Artificial
270 <220> FEATURE:
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273 <400> SEQUENCE: 14
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278 <211> LENGTH: 29
279 <212> TYPE: DNA
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283 <223> OTHER INFORMATION: PCR primer
285 <400> SEQUENCE: 15
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289 <210> SEQ ID NO: 16
290 <211> LENGTH: 42
291 <212> TYPE: DNA
292 <213> ORGANISM: Artificial
294 <220> FEATURE:
295 <223> OTHER INFORMATION: PCR primer
297 <400> SEQUENCE: 16
298 gcggcatgcc aatcgccgcg agttctatgt aagcagcttg cc 42
301 <210> SEQ ID NO: 17
302 <211> LENGTH: 26
303 <212> TYPE: DNA
304 <213> ORGANISM: Artificial
306 <220> FEATURE:
307 <223> OTHER INFORMATION: PCR primer
309 <400> SEQUENCE: 17
310 cgggatccat ggctgcgaga gcgtca 26

RAW SEQUENCE LISTING DATE: 12/02/2004
PATENT APPLICATION: **US/10/804,331** TIME: 12:44:08

Input Set : **A:\9368-5.ST25.txt**
Output Set: **N:\CRF4\12022004\J804331.raw**

313 <210> SEQ ID NO: 18
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321 <400> SEQUENCE: 18
322 cgggatcctt attgagacaa ggggtcgc 28
325 <210> SEQ ID NO: 19
326 <211> LENGTH: 24
327 <212> TYPE: DNA
328 <213> ORGANISM: Artificial
330 <220> FEATURE:
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333 <400> SEQUENCE: 19
334 ccctgctcgt gccagtgttg atgc 24
337 <210> SEQ ID NO: 20
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339 <212> TYPE: DNA
340 <213> ORGANISM: Artificial
342 <220> FEATURE:
343 <223> OTHER INFORMATION: PCR primer
345 <400> SEQUENCE: 20
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349 <210> SEQ ID NO: 21
350 <211> LENGTH: 30
351 <212> TYPE: DNA
352 <213> ORGANISM: Artificial
354 <220> FEATURE:
355 <223> OTHER INFORMATION: PCR primer
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361 <210> SEQ ID NO: 22
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364 <213> ORGANISM: Artificial
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367 <223> OTHER INFORMATION: PCR primer
369 <400> SEQUENCE: 22
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373 <210> SEQ ID NO: 23
374 <211> LENGTH: 25
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378 <220> FEATURE:
379 <223> OTHER INFORMATION: PCR primer
381 <400> SEQUENCE: 23
382 gttcccgttc cagccaatgt atccg 25
385 <210> SEQ ID NO: 24

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 12/02/2004
PATENT APPLICATION: **US/10/804,331** TIME: 12:44:09

Input Set : **A:\9368-5.ST25.txt**
Output Set: **N:\CRF4\12022004\J804331.raw**

Invalid <213> Response:
Use of "Artificial" only as "<213> Organism" response is incomplete, per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

Seq#:1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,27,28
Seq#:29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44

VERIFICATION SUMMARY DATE: 12/02/2004
PATENT APPLICATION: **US/10/804,331** TIME: 12:44:09

Input Set : **A:\9368-5.ST25.txt**
Output Set: **N:\CRF4\12022004\J804331.raw**